



2018 Drinking Water Quality Report

Representing Reporting of 2017

Consumer Confidence Report

Annual Water Quality Report

January 1 – December 31, 2017

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

CITY OF LEAGUE CITY is purchased Surface Water from the Gulf Coast WA and City of Houston.

CITY OF LEAGUE CITY purchases water from GULF COAST WATER AUTHORITY TX CITY. GULF COAST WATER AUTHORITY TX CITY provides purchase surface water from [Brazos River] located in [Galveston County]. CITY OF LEAGUE CITY purchases water from CITY OF HOUSTON. CITY OF HOUSTON provides purchase surface water from [Trinity River] located in [Harris County].

For more information regarding this report contact:

Tommy Arredondo, Water Superintendent
(281) 554-1041

We Welcome Your Comments!

There are many opportunities available to learn more about the League City Water Production Department and water quality.

- For questions or concerns about water quality, call (281) 554-1041.
- For inquiries about public participation and policy decisions, call (281) 554-1033.

The Water Production Department is part of the city government.

The City Council meets the second and fourth Tuesdays of each month.
Call (281) 554-1030 for meeting times and locations.

Sources of Drinking Water:

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (800) 426-4791.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly, or immunocompromised persons such as those undergoing chemotherapy for cancer; persons who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders, can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care providers. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline (800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead.



Information about Source Water Assessments

The TCEQ completed an assessment of your source water and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detections of these contaminants may be found in this Consumer Confident Report. For more information on source water assessments and protection efforts at our system, contact (Tommy Arredondo, Water Superintendent) 281-554-1041.

For more information about your sources of water, please refer to the Source Water Assessment Viewer available at the following URL: www.tceq.texas.gov/gis/swaview

Further details about sources and source-water assessments are available in Drinking Water Watch at the following URL: <http://dww2.tceq.texas.gov/DWW/>

Water Sources: Major Aquifer – Gulf Coast Aquifer | River – Trinity River, Brazos River

Source Water Name		Type of Water	Report Status	Location
Calder Road	Calder Road	GW	Y	2696 Calder Dr.
Walker Street	Walker Street	GW	Y	700 W. Walker St.
3rd Street at Park	3rd Street at Park	GW	Y	516 3rd St.
South Shore Harbor	South Shore Harbor	GW	Y	2600 FM 518 East
Country Side	Country Side	GW	Y	5929 FM 518 West
Grissom Rd / Northside	Northside	GW	Y	4200 Grissom Rd.
Dickinson Ave.	Dickinson Ave	GW	Y	2050 Dickinson Ave.
Eastside	Eastside	GW	Y	7503 South Shore Blvd
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	PLANT - 2690 Calder Rd.
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	Meadowbend Plant 2819 Wood Hollow Dr.
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	South Shore Harbor Plant 2800 FM 518
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	Bayridge Plant 307 Windward Dr.
SW From City of Houston	CC From TX1010013 City of Houston	SW	Y	South Hwy 3 Plant 18530 Hwy 3
SW From City of Houston SE Plant	CC From TX1010013 City of Houston	SW	Y	Walker Plant 700 W. Walker St.
SW From GCWA TX City	CC From TX0840153 Gulf Coast WA	SW	Y	Calder Road Plant 2690 Calder Rd.

Gulf Coast Water Authority – Thomas Mackey Water Treatment Plant – For Regulated, Unregulated, and Secondary Contaminants please call (409) 948-6415.

City of Houston Southeast Water Purification Plant – For Regulated, Unregulated, and Secondary Contaminants - please call (713) 837-0311.

Who is Captain H₂O?

Captain H₂O was created in 2011 to assist with public outreach and education about the importance of water conservation. He appears, along with our Water Conservation Team, at various public venues and in 2015, at several CCISD schools where our water conservation program was presented to enthusiastic students. We hope to continue these school visits throughout the district in the 2018/2019 school year.

In 2018, we held our annual Water Conservation Poster Contest and third annual Essay Contest with CCISD schools, hosted a Pre-school Story Time that featured Bonnie Keith with the League City Helen Hall Library. 2017 Texas Water Development Board Water Loss Audit Report: Total Water Loss- Percentage 14.13%.

For more information about water conservation or inquiries about the Water Conservation Team and Captain H₂O presenting a water conservation program, please call (281) 554-1041, visit www.leaguecity.com or [click here](#) to view our Water Conservation page.



About the Following Tables...

The pages that follow list all of the federally regulated or monitored contaminants which have been found in your drinking water.

The US EPA requires water systems to test for up to 97 contaminants.

Definitions

The following tables contain scientific terms and measures, some of which may require explanation.

Avg:

Regulatory compliance with some MCLs is based on running annual average of monthly samples.

Level 1 Assessment:

A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment:

A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Maximum Contaminant Level (MCL)

The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

Maximum Residual Disinfectant Level (MRDL)

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG)

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Regulated Contaminants

Contaminants detected at this entry point that have an enforceable MCL.

Treatment Technique or TT

A required process intended to reduce the level of a contaminant in drinking water.

Unregulated Contaminants & Secondary Standards

Contaminants detected at this entry point that do not have an enforceable MCL, but may have an MCLG or SCL

Secondary Contaminant Level (SCL) represents reasonable goals for drinking water quality & provides a guideline for public water suppliers

Abbreviations

MFL	million fibers per liter (a measure of asbestos)	ppm	milligrams per liter (mg/L) or parts per million - or one ounce in 7,350 gallons of water.
NTU	Nephelometric Turbidity Units (a measure of turbidity)	ppt	parts per trillion, or nanograms per liter (ng/L)
pCi/L	picocuries per liter (a measure of radioactivity)	ppq	parts per quadrillion, orpicograms per liter (pq/L)
ppb	micrograms per liter (µg/L) or parts per billion - or one ounce in 7,350,000 gallons of water	ND	Non detect, contaminant not detected
		mrem	millirems per year (a measure of radiation absorbed by the body)
		NA	not applicable
		ND	Non detect, contaminant not detected

Disinfectant Residual

A blank disinfectant residual table has been added to the CCR template, you will need to add data to the fields. Your data can be taken off the Disinfectant Level Quarterly Operating Reports (DLQOR).'

Year	Disinfectant Residual	Average Level	Range of Levels Detected	MRDL	MRDLG	Unit of Measure	Likely Source of Contaminant
2017	Chloramines	1.66	0.50 – 3.57	4.0	4.0	mg/L	Water additive used to control microbes..

Regulated Contaminants

EP002: City of Houston Southeast Water Purification Plant. No averages, all data based on single result.

Contaminant	MCL	MCLG	Reading	QAQC
Atrazine (µg/L)	3	3	.26	BT 2/28/18
Barium (mg/L)	2	2	0.0477	BT 2/28/18
Fluoride (mg/L)	4	4	0.48	BT 2/28/18
Simazine (µg/L)	4	4	0.20	BT 2/28/18
Nitrate (mg/L)	10	10	0.86	BT 2/28/18
Gross Beta (pCi/L)	50	0	4.8	BT 3/5/18
Cyanide (mg/L)	0.2	0.2	0.01	BT 2/28/18

Lead and Copper

ACTION LEVEL GOAL (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety. **ACTION LEVEL:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Contaminant	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Unit of Measure	Violation	Likely Source of Contamination
Copper	2017	1.3	1.3	0.669	0	ppm	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2017	0	15	2	1	ppb	N	Corrosion of household plumbing systems; Erosion of natural deposits.

Radioactive Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Beta/photon emitters	2017	4.8	0 - 4.8	0	50**	pCi/L*	N	Decay of natural and man-made deposits.
Combined Radium 226/228	1/22/2013	1	1 - 1	0	5	pCi/L	N	Erosion of natural deposits.

*EPA considers 50 pCi/L to be the level of concern for beta particles.

**Because the beta particle results were below 50pCi/L, no testing for individual beta particle constituents was required.

Regulated Contaminants

Disinfectants and Disinfection By-Products	Collection Date	Highest Compliance Average Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Haloacetic Acids (HAA5) *	2017	37	7 - 51.8	No goal for the total	60	ppb	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2017	41	21.2 - 54	No goal for the total	80	ppb	N	By-product of drinking water disinfection.

* EPA considers 50 pCi/L to be the level of concern for beta particles.

Inorganic Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Arsenic	2017	2.2	0 - 2.2	0	10	ppb	N	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
Barium	2017	0.244	0.0484 - 0.244	2	2	ppm	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	2017	0.89	0.42 - 0.89	4	4.0	ppm	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Nitrate [measured as Nitrogen]	2017	1	0.13 - 1.05	10	10	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Nitrite [measured as Nitrogen]	03/30/2015	0.02	0.02 - 0.02	1	1	ppm	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.

Synthetic Organic Contaminants INCLUDING Pesticides AND Herbicides

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Atrazine	2017	0.29	0 - 0.29	3	3	ppb	N	Runoff from herbicide used on row crops.
Simazine	2017	0.1	0 - 0.1	4	4	ppb	N	Herbicide runoff.

Volatile Organic Contaminants

Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contaminant
Ethylbenzene	2017	0.8	0 - 0.8	700	700	ppb	N	Discharge from petroleum refineries.
Xylenes	2017	0.0058	0 - 0.0058	10	10	ppm	N	Discharge from petroleum factories; Discharge from chemical factories.

Coliform Bacteria

Maximum Contaminant Level Goal	Total Coliform Maximum Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contaminant
0	5% of monthly samples are positive.	1		0	N	Naturally present in the environment.

Water Wise FAQ's

How is water recycled/reclaimed?

Water utilities use a variety of well-tested and reliable treatment processes to recycle/reclaim water. Utilities generally describe the various stages of treatment rather than the technologies utilized when referring to water quality, as there are multiple treatment techniques for achieving essentially the same result. Generally speaking, the four core stages of treatment are Primary Treatment, Secondary Treatment, Tertiary or Advanced Treatment, and Disinfection. The number of treatment steps will vary based on how the water will be used. Most recycled water, however, will undergo some form of disinfection.

Is recycled/reclaimed water safe?

Reclaimed water is highly engineered for safety and reliability so that the quality of reclaimed water is more predictable than many existing surface and groundwater sources. Reclaimed water is considered safe when appropriately used. Although reclaimed water is of very high quality, it is not used directly for drinking water in the United States. Reclaimed water planned for use in recharging our aquifers or augmenting our surface water receives adequate and reliable treatment before mixing with naturally occurring water and undergoing natural restoration processes. Some of this water eventually becomes part of our drinking water supplies.